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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,451	03/28/2001	Jason Alexander Cu	2061P/SVL9-2001-0001US1	6671

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EXAMINER
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CHEN, TE Y

ART UNIT	PAPER NUMBER
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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/820,451	<b>Applicant(s)</b> CU ET AL.	
	<b>Examiner</b> SUSAN Y. CHEN	<b>Art Unit</b> 2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                            |                                                                                         |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on March 15, 2000 has been entered.

Claims 1-26, are pending for examination.

### ***Telephone Interview***

To expedite the processing of instant application, a telephone interview has been conducted between applicant's representative (Mr. Joseph A. Sawyer) and the examiner (Susan Chen) on April 28, 2010. During the interview the examiner indicated that the claimed step (c1) in claims: 3 and 10 seems to be incomplete, thus, requested the attorney to further explain/amend the claims, however, there is no further action was taken, as such, the office action is given below.

For claims 8-14 and 23, the examiner regards that the claimed “computer program product tangibly stored on a computer-readable medium” is a manufactured medium product that excludes any network signal as specified in page 11 of the instant application dated March 28, 2001.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-26, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 1, 8, 15 and 25, applicant is advertised to avoid using the phrase “capable of”, since the phrase is unsure where the claimed operation is really being performed or not.

As to claims 3, it recites the following:

The computer implemented method of claim 1, wherein the column function performing step(c) further includes the step of :

(cl) performing the column function on the row to provide an output; and wherein the method further includes the step of

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(d) repeating steps (b1), (b2) and (c1) for each remaining row of the at least one row.

As set forth above the claimed "c1" step is incomplete, which renders the claim as in distinct.

As to claim 10, it recites the following:

The computer-readable medium program product of claim 8, wherein the column function performing instructions (c) further includes instructions for:

(c1) performing the column function on the row to provide an output; and wherein the program further includes instructions for

(d) repeating instructions (b1), (b2) and (c1) for each remaining row of the at least one row.

Again, it seems that the claimed "c1" step is incomplete, which renders claim 10 as in distinct.

As to claims 2-7, 9-14, 16-24 and 26, these claims have the same defects as their base claims, hence, are rejected for the same reason.

Due to the ambiguous nature of instant invention, the following art rejection is as to the best of the examiner's ascertain.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-4, 6-11, 13-18 and 20-26, are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (U.S. Patent No. 5,745,739) in view of Agrawal et al. (U.S. Patent No. 6,366,903).

For the claimed limitations, Wang disclosed the following (Title, Abstract, Fig.(s) 1-10), comprising:

Claim 1, the method wherein the computer performs the following functions comprising the steps of:

(a) allowing a user to specify the at least one row as an argument for a generalized scalar function [e.g., *Per the linear physical memory address Converter at the Title & "For instance, in the case of a computer aided design (CAD) application, the processor 12 may receiver user input regarding creating and locating objects in 3-D space. The processor 12, in turn, transfers instructions regarding the size, location, texture, translucence, etc. of such objects to the drawing processor 32. In response, the drawing processor 32 creates a pixel image representation of a plane of view of such objects in 3-D space." col. 1, lines 67 – col. 2, lines 8, wherein "The case of texture mapping requires additional processing than ordinary 2-D virtual coordinate to linear address conversion." Col. 20, lines 16-18*];

(b) simulating a column environment for the at least one row using the generalized scalar function to allow the at least one row to be provided to the column function as though the at least one row was a column [e.g., *"Second, texture mapping can be performed contemporaneously with a bitblt operation. Such an operation may arise if an object in 2-D or 3-D space is moving on the screen, such as during a flight simulation or virtual reality application..." Col. 20, lines 52 – 23*]; and

(c) performing the column function on the at least one row to provide at least one output [e.g., *"The contemporaneous texture mapping/bitblt can be summarized as follows: Each row (column) of the source rectangle is read out one at a time. A corresponding row of texture data is read (or more than one corresponding rows of texture data read, and interpolated to produce a single texture row) out. The source row is combined with the texture row. The combined row is written to the destination rectangle. The process is repeated as necessary to complete the source rectangle. Col. 20, lines 52 – 23*].

Wang did not specifically disclosed that method for utilizing a column function for a relational database is in a structure query language (SQL) environment.

However, Agrawal disclosed the claimed features [e.g., Abstract, Fig. 2 and associated texts].

Wang and Agrawal are analogous art and both in the same endeavor to simulate graphic design per a combined materialized view [e.g., Wang: the created pixel image representation of a plane of view in 3-D space at col. 1, lines 67 – col. 2; Agrawal: 235, Fig. 2], thus, with the teachings of Wang and Agrawal in front of him/her, it would have been obvious for an ordinary skilled artisan at the time the invention was made to applying the relational SQL processing as disclosed by Agrawal into Wang's invention, because by doing so, the combined invention would be upgraded to provide a query optimizer in combined materialized views for facilitating an end user's simulation design.

2. the combined invention of Wang and Agrawal further disclosed that the simulating step(b) further includes the steps of :

(b1) fetching a row of the at least one row [e.g., Wang: *"Each row (column) of the source rectangle is read out one at a time"* col. 21, lines 6-7]; and

(b2) utilizing the generalized scalar function to provide the row to the column function as though the row was a column [e.g., Wang: ***"texture mapping can be performed contemporaneously with a bitblt operation..."*** col. 20, lines 52-col. 21, lines 13].

3. (Currently Amended) The computer implemented method of claim 1, wherein the column function performing step(c) further includes the:



(cl) performing the column function on the row to provide an output [e.g., Wang: *col. 20, lines 52-col. 21, lines 13*]; and

(d) repeating steps (bl), (b2) and (cl) for each remaining row of the at least one row [e.g., Wang: "...**The process is repeated as necessary to complete the source rectangle.**" *Col. 20, lines 52- col. 21, line 13*].

4. (Currently Amended) The computer implemented method of claim 1, wherein the column function provides a maximum of each of the at least one row [e.g., Agrawal: the "MAX-TABLES" value is the maximum number of tables referenced in any query in the workload" of a query cost evaluation step 303, Fig. 3].

6. (Currently Amended) The computer implemented method of claim 1, wherein the column function performing step(c) further includes:

(cl) performing an initialization phase in response to a first entry of each of the at least one row [e.g., Agrawal: **the step 302, Fig. 3**];

(c2) performing an evaluation phase on each entry of the at least one Row [e.g., Agrawal: **the steps: 305-306 "For" loop evaluation phrase, Fig. 3**];

(c3) performing a finalization phase after evaluation of a last entry of the at least one row [e.g., Agrawal: **the step: 307, Fig. 3**].

7. (Currently Amended) The computer implemented method of claim 1, wherein the generalized scalar function in combination with the column function allow the

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operation of the column function to be performed for the indeterminate number of entries in the at least one row [e.g., Wang: *"The scale factors for determining which rows of pixels to read-out"* col. 21, lines 54-56; Agrawal: *The "K" number in Fig. 3*].

As to claims 8-11, 13-18 and 20-26, these claims recite similar subject matters as claims 1-4 and 6-7, in form of computer storage media product or system or slightly different wording method, hence, are rejected for the same reason.

### ***Claim Rejections - 35 USC § 103 (Continue)***

Claims 5, 12 and 19, are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (U.S. Patent No. 5,745,739) in view of Agrawal et al. (U.S. Patent No. 6,366,903) as applied to claims 1, 8 and 15 above, and further in view of Mackey et al. (U.S. Patent No. 6,691,259).

Wang and Agrawal did not specifically disclosed that the column function provides a minimum of each of the at least one row.

However, Mackey disclosed the claimed minimum function [e.g., *"The monitor station (16 m) captures all the performance monitor data concerning the test server (18) and stores the associated logs. **This monitoring is done remotely in order to minimize the performance impact on the server 18 under test**" col. 5, lines 31 - 35*].

Wang, Agrawal and Mackey are analogous art and both in the same endeavor to simulate graphic design per a combined materialized view [e.g., Wang: the created pixel image representation of a plane of view in 3-D space at col. 1, lines 67 – col. 2; Agrawal: 235, Fig. 2; Mackey: Col. 3, lines 1 – 10], thus, with the teachings of Wang,

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Agrawal in front of him/her, it would have been obvious for an ordinary skilled artisan at the time the invention was made to applying the minimum monitoring function as disclosed by Mackey into the combined Wang and Agrawal invention, because by doing so, the combined invention would have be upgraded to monitor a "GRAPHICAL UPDATE" based on the "K" mean test performance for a Thin-Client/Server set of installations. [e.g., Mackey: col. 3, lines 33-45, Fig. 1].

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

1) Matichuk (U.S. Patent No. 7,269,580) which disclosed an application integration system and method using intelligent agents for integrating information access over extended networks.

2) Chen (U.S. Patent No. 6,947,934) which disclosed a computer implemented database management systems, and more particularly, to aggregate predicates and search in database management systems.

### ***Points of Contact***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SUSAN Y. CHEN whose telephone number is (571)272-4016. The examiner can normally be reached on Monday - Friday from 7:00-4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mofiz Apu can be reached on 571-272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Susan Y Chen/  
Partial Sig. Examiner  
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May 22, 2010